

REMARKS

The Examiner maintains the rejection of claims 1-14 under 35 U.S.C. 102(b) as being anticipated by Taniguchi, and of claims 15-22 under 35 U.S.C. 103(a) as being unpatentable further in view of Kaneko.

Applicant's claimed invention is an apparatus and method for analyzing a transport stream for a compressed video signal, such as an MPEG compressed signal. An information element, such as PAT, PMT, SDT, etc., is extracted from the transport stream and, based upon the extracted information element, a message of a predetermined type is generated. A priority is assigned to the message according to a predetermined criticality of the message to the integrity of the compressed video signal. The message is added to a message queue if the assigned priority is equal to or greater than a variable threshold priority, or is otherwise discarded. The variable threshold priority may be adjusted according to the size of the message queue to keep it within a predetermined range. Each message in the message queue is analyzed in time sequence.

In contradistinction to Applicant's claimed invention Taniguchi discloses a system for providing dynamic adjustment of a transmission rate of an encoded stream while maintaining the highest quality attainable, rather than a system for analyzing the encoded stream. Load variations downstream are monitored, and fed back upstream to control the transmission rate through automatic discarding of packets of data (not messages in a message queue) having a lower priority, thereby decreasing the data volume. Specifically Taniguchi has a transmission node **11**, a relay node **12** and a reception node **13** coupled to a computer network **14**. The transmission node has a

data accumulation device **111**, a stream sending device **112** and a stream transfer device **20**; the relay mode just has a stream transfer device; and the reception node has a stream transfer device that includes a Quality of Service (QoS) controller **125**, a stream decoding and reproducing device **132** and a display device **133**. A user may interface with the reception node stream transfer device via a setting and operation section **131**. The stream transfer device at the reception node has a communication interface section **26** for interacting with the setting and operation section at one node **262** and with the computer network at another node **261**. The stream from the network via the communication interface section is input to a stream reception section **21** and then to a stream conversion section **23** for stream shaping by “annulling packets” of low priority determined from a priority table controlled by a user. The converted stream from the stream conversion section goes to a stream transmission section **22** and then to the stream decoding and reproducing device. A communication controller **24** interacts with the communication interface section, the stream reception and transmission sections, the stream conversion section and the QoS controller. The stream reception section measures a data reception volume, which measurement is provided to the QoS controller as a QoS state message regarding an effective reception rate. The QoS controller has a receiving and analyzing section **251** that analyzes the QoS state messages, which section has a queue structure buffer that stores the messages in order of reception and analyzes the messages in like order. The transmission rate is adjusted to be within a specified range by dropping low priority packets below a priority threshold. Note that the “QoS state messages are messages for notification of internal states of the stream transfer devices 20 of the nodes” and not of predetermined types

dependent upon information elements extracted from the transport stream.

In response to Applicant's prior arguments, the Examiner first tries to define "extract" to suit his own purpose, rather than as used by Applicant in the specification. "Extract" means, as is clear from Applicant's description and from Webster's New Universal Unabridged Dictionary, Deluxe Second Edition, "to take out or select a part of", i.e., "an excerpt." The Examiner's purported definition – "to draw forth or to determine by calculation" – does not at all comport with the clear import of Applicant's specification, which recites "to extract *information elements* from the transport stream for analysis." (Emphasis added) The QoS controller of Taniguichi receives a QoS state message from the stream reception section which represents "a data reception volume per unit time", and is not of "a predetermined type" according to an *information element* extracted from the transport stream. There is nothing in Taniguichi that indicates an information element from the transport stream itself is extracted, only that a data reception volume is measured, which measurement is put into a state message for the QoS controller. Thus Taniguichi does not in fact teach or suggest to one skilled in the art "extracting information elements from the transport stream."

The Examiner continues by stating that the number of messages sent, and therefore the size of the queue, is affected by the transmission rate and the QoS. The portion of Taniguichi to which the Examiner refers to support his statement indicates that, if a transmission message notifies a set value of the transmission rate QoS parameter, the QoS parameter updates the set value to a latest set value. Column 15, lines 6-16 of Taniguichi talks about messages sent from the self node and other nodes being stored in a queue, from which the messages are read and analyzed in the order

of reception. There is no indication that the queue is affected by the "priority" of the messages, as Taniguichi does not mention anything about message priority. Nor is there any indication in Taniguichi that any messages are discarded from the queue according to priority. Rather Taniguichi indicates that all messages are read and analyzed. The only discarding done in Taniguichi is of data packets from the encoded stream according to packet priority in order to maintain the desired transmission rate. Therefore Taniguichi does not teach or suggest that messages are placed in a message queue according to a priority dependent on the criticality of the type of message to the integrity of the transport stream being analyzed, with lower priority messages below a priority threshold being discarded.

Finally the Examiner states that Taniguichi discloses various nodes that are modules "that processes these predetermined modules", equating that to Applicant's claimed registering which predetermined message types are processed by which ones of a plurality of analyzer modules. Applicant does not really understand what the Examiner means by this, but Applicant points out that the "modules" of Taniguichi are not analyzer modules. Taniguichi teaches that the state messages from the various nodes, which messages as pointed out above are not determined by extracted "information elements", are received and routed to the proper processing sections. Such messages are state messages regarding the internal state of the stream transfer device, i.e., transmission messages that set the QoS parameter, data results messages that convey data volume per unit time, etc. Thus Taniguichi does not teach or suggest registering which predetermined message types are processed by which "analyzer" module.

Applicant submits that, pursuant to the arguments previously submitted and additionally set forth above, Taniguichi does not have the step of "extracting an information element from the transport stream"; does not generate "a message of a predetermined type dependent on the extracted information element" since Taniguichi only generates internal device state messages and not message types according to an "extracted information element"; does not assign a priority to the message "dependent on a predetermined criticality of the predetermined type to the integrity of the compressed video signal"; does not add "the message to a message queue if the priority of the message exceeds a variable threshold priority level"; does not adjust "the variable threshold priority level in dependence upon whether a size of the message queue is within a predetermined range" while "discarding messages in the message queue having a priority less than the adjusted variable threshold priority level"; and does not analyze "a next message from the message queue according to the predetermined type of the next message." Thus claims 1 and 8 together with claims 2-7 and 9-22 dependent therefrom are deemed to be allowable as being neither anticipated by Taniguichi nor rendered obvious to one of ordinary skill in the art by Taniguichi in view of Kaneko.

In view of the foregoing remarks allowance of claims 1-22 is urged, and such action and the issuance of this case are requested.

Respectfully submitted,

Matthew Towler

By: /Matthew D. Rabdau/
Matthew D. Rabdau
Reg. No. 43,026
Attorney for Applicant

TEKTRONIX, INC.
P.O. Box 500 (50-LAW)
Beaverton, OR 97077
(503) 627-5068
7443 US